transplantation (SCT) for lymphomas and the engraftment of donor immunocompetent cells is essential. The height of host "immunological barrier" belongs to the major factors influencing engraftment. Some patients transplanted after non-myeloablative regimens finally reconstituted their own immunocompetent cells because of insufficient immunosuppression and there has been no room for GvL effect. On the other hand, many pretreated immunocompromised recipients developed severe complications due to unnecessary toxicity. 11 patients with non-hodgkin lymphomas (NHL - 8x) and chronic lymphatic leukemia (CLL - 3x) underwent non-myeloablative allogeneic SCT from sibling donor. No one of them was in complete remision (CR) before SCT. The recipients with the pretransplant level of CD3+ cells below than 0, 5x10 9/L were grafted after conditioning combined fludarabin (125mg/m2) and cyclophosphamide (120mg/kg). Those ones with CD3+ cells above 0, 5x10 9/L underwent SCT after fludarabin and melphalan (140mg/m2), fludarabin, melphalan and ATG (40mg/kg)or fludarabin, cyclophosphamide and ATG. The "graft versus host disease" (GvHD) prophylaxis consisted of cyclosporine A (CsA) only or CsA combined with the short-course of methotrexate (MTX). Donor chimerism was evaluated in T-cell population at day +30, +60, +100 after SCT. CsA tapering depended on the grade of donor chimerism in T-cells. 10 patients (90, 9%) achieved complete donor chimerism in T-cells and sustained CR of their disease at the posttransplant follow-up period (median 134 days). 6 recipient (54, 5%) developed GvHD. 3 patients (27, 3%) died of transplant-related complications. The combination of fludarabin and cyclophosphamide (+/- ATG) was associated with significantly lower toxicity and allowed sufficient engraftment of donor cells with effective immunological tumour control in severe immunocompromised hosts. The reduction of conditioning-related toxicity without the decrease of CR rate fully advocate the pretransplant evaluation of T-cell populations in recipients.

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COMPARISON OF THREE CONDITIONING REGIMENS FOR AUTOLOGOUS STEM CELL TRANSPLANTATION IN NON-HODGKINS LYMPHOMA

Fein, S.G.; Oberstein, E.; Goodman, M.; Byrnes, J.; Fernandez, H.F.
Hematology/Oncology, University of Miami, Miami, FL.

The optimal conditioning regimen for non-Hodgkins Lymphoma (NHL) patients receiving autologous hematopoietic stem cell (HSC) transplantation remains uncertain. In many centers, cyclophosphamide and total body irradiation (TBI) have been replaced by combination chemotherapy regimens. One of these is busulfan(BU) and cyclophosphamide(CY). Recent studies suggest that intravenous busulfan may be more efficacious than oral busulfan, partly attributable to more predictable pharmacokinetics. To compare these conditioning regimens, we reviewed 63 autologous HSC transplants performed at our institution from 1994-2002. Among these, 22 patients with NHL (73% intermediate or high grade) were treated with cyclophosphamide 120 mg/kg and TBI 1200 cGy given as divided daily fractions for 3 days (Cy/TBI), 18 patients (78% intermediate grade) with oral busulfan 16 mg/kg and cyclophosphamide 120 mg/kg (Oral Bu/Cy), and 23 patients (91% intermediate grade) with intravenous busulfan 12.8 mg/kg with cyclophosphamide 120 mg/kg (IV Bu/Cy). The median age for each of the three groups was comparable. The groups differed with respect to number of pre-transplant chemotherapy treatments- 36% of Cy/TBI heavily pre-treated (more than 8 cycles of chemotherapy), compared to 64% of oral Bu/Cy and 77% of IV Bu/Cy. The IV Bu/Cy patients were more likely to be pre-treated with rituximab (45%) than Cy/TBI (0%) and oral Bu/Cy (6%). Treatment-related toxicity and mortality were comparable, though both busulfan cohorts had a longer time to engraftment. Median follow-up times were 7.1 years (Cy/TBI), 3.6 years (oral Bu/Cy), and 2.1 years (IV Bu/Cy). Overall (OS) and relapse-free survivals (RFS) at two years were 77% and 59% (Cy/TBI), 61% and 56% (oral Bu/Cy), and 71% and 71% (IV Bu/Cy). Although follow-up is short, Kaplan-Meier survival analysis suggests a trend towards improved RFS among IV Bu/Cy patients. Log-rank comparison of the OS curves reveals no significant difference amongst the three groups. Based on this review, the toxicity and efficacy are comparable using IV Bu/Cy, Cy/TBI or oral Bu/Cy, as the conditioning regimen in autologous HSC transplant for NHL.

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AUTOLOGOUS HEMATOPOIETIC STEM CELL TRANSPLANTATION FOR TREATMENT OF MULTICENTRIC CASTLEMAN'S DISEASE/POEMS SYNDROME

Chamarthy, U.; Janakiraman, N.; Kamboj, G.; Abdel-Raheem, M.; Ray, K.; Parikh, D. Hem / Onc / BMT, Henry Ford Health System, Detroit, MI.

BACKGROUND: POEMS (polyneuropathy, organomegaly, endocrinopathy, M protein, skin changes) syndrome, a rare multisystemic disorder, is associated with multicentric Castleman's disease (MCD) in 50% of cases. The treatment of MCD remains a challenge. There have been reports of limited and variable effectiveness using steroids, chemotherapy and immunomodulators (anti-IL6, interferon, Rituximab). There has only been one previous case report (Repetto et al. 1986) using HDCT/HSCT. We report a case of MCD/POEMS successfully treated with high dose chemotherapy (HDCT) and hematopoietic stem cell transplantation (HSCT). CASE RESENTATION: A previously healthy 24 year-old male presented with a rapidly progressing (demyelinating/axonal) neuropathy, initially involving the lower, and eventually the upper extremities - around November 2000. Within three months the patient became wheel-chair bound (ECOG Performance status=4), developed generalized lymphadenopathy, hepato-splenomegaly and gynecomastia. Lymph node and bone marrow biopsies were non-diagnostic. He underwent splenectomy in May, 2001. The pathology showed angiofollicular hyperplasia consistent with Castleman's disease. He had low testosterone levels, Ig A λ monoclonal protein in the serum, and cutaneous hemangiomas. Serologic screening for HIV and HHV-8 were negative. With these findings, a diagnosis of MCD/POEMS was established. Therapeutic trials of steroids, Rituximab, IVIG, Cyclophosphamide/prednisone failed. Given his young age and rapid clinical deterioration he was offered high dose chemotherapy with HSCT. Peripheral blood stem cells were harvested using Cyclophosphamide (3g/m^2)/ G-CSF (10μg/Kg). The patient was given Melphalan (200mg/m^2) as conditioning regimen, followed by autologous stem cell infusion. Hospital course was complicated by febrile neutropenia and cholecystitis. Clinical and radiological resolution of all lymphadenopathy occurred within 4 weeks. He also had gradual recovery of his neurological deficits and hepatomegaly. The patient remains in remission a year later (ECOG PS=0) CONCLUSION High-dose chemotherapy with autologous hematopoietic stem cell transplant resulted in complete remission of aggressive and refractory MCD/POEMS syndrome with a durable response at one year. HDCT/HSCT is a novel treatment option for this rare but challenging disease.

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CD34+ COUNTS AFTER ETOPOSIDE AND CYCLOPHOSPHAMIDE PLUS G-CSF MOBILIZATION VERSUS G-CSF ALONE IN MULTIPLE MYELOMA PATIENTS UNDERGOING AUTOLOGOUS TRANSPLANTATION

Pierce, T.N.; Scott, L.M.; White, M.; Agura, E.; Berryman, R.B.; Fay, J.W.; Vance, E.; Pineiro, L. .

There were 83 patients who had an autologous transplant for multiple myeloma. All patients had a myeloablative regimen with 26 (31%) receiving Melphalan, 55 (66%) received Melphalan/Total Body Irradiation (TBI). There was 1 patient who received ThioTepa/TBI and 1 who received Cyclophosphamide/TBI as the conditioning regimen. Of the 83 pts, there were 58 (70%) who received mobilization with a continuous infusion of etoposide (2400mg/m2 over 34 hours) followed by cyclophosphamide 150 mg/kg followed by G-CSF at a dose of 5 mcg/kg/day. There were 25 patients (30%) that received mobilization with G-CSF only at a dose of 16 mcg/kg/day. For the patients who received chemotherapy mobilization, the average number of PBSC collections required was 1.8 (Range 1 to 7, median=1). Of the patients who received G-CSF mobilization, the average number of collections was 2.8 (Range 1 to 5, median=2).